

REMARKS

Introduction

In response to the Office Action dated August 2, 2007, Applicants have amended claims 12, 14, and 16. Claims 18-20 have been cancelled. Support for amended claims 12, 14, and 16 is found in, for example, originally filed claims 18-20. Care has been taken to avoid the introduction of new matter. In view of the foregoing amendments and the following remarks, Applicants respectfully submit that all pending claims are in condition for allowance.

Claim Rejections Under 35 U.S.C. § 102

Claims 12-32 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,276,351 (hereinafter Yamazaki). The Office Action asserts that Yamazaki shows a base member 21 made of an alloy or composite mainly composed of Cu and W and/or Mo, wherein a coating layer 30 made of a hard carbon film is provided on at least a surface of the base member on which another member for the semiconductor device is bonded with a resin 31 in Fig. 2.

Turning to the prior art, Yamazaki describes that the surface of the die 21a and the inner lead 21b are covered with an **inorganic material** 30 (col. 6, lines 30-32). Further, in the Background Section, Yamazaki discusses the *disadvantages* of bonding a metal lead frame to the die with a polyamide resin (col. 2, lines 15-28). Yamazaki describes that the adhering material easily peels off and produces a suboxide between the organic resin of the package and the copper or 42 Alloy (col. 2, lines 25-28). Yamazaki states in col. 2, lines 28-44:

For this reason, *moisture permeates* into the plastic molding package 103 through the adhering material and the suboxide and collects at the rear surface of the die 102 or the like under usual conditions as well as under severe conditions such as in water or in a high humid atmosphere. ***This***

moisture is rapidly vaporized to produce cracks 108 and 109 and a void 110 by soldering at 260°C for 3 to 10 seconds, for example.

Although a conventional method of fixing the electronic device with organic bond or organic silver paste bond is very suitable for mass production at a low cost, components vaporized from the organic bond are absorbed on the lead frame or the die in an atmosphere at room temperature to 300 °C, *resulting in a poor adhesion between the lead frame and a molding resin* or a protective film (*emphasis added*).

Thus, Yamazaki fails to disclose or suggest, "...a coating layer made of a hard carbon film is provided on at least a surface of the base member on which another member for the semiconductor device **is bonded with a resin**," as recited in amended claims 12, 14, and 16.

As anticipation under 35 U.S.C. § 102 requires that each and every element of the claim be disclosed, either expressly or inherently (noting that "inherency may not be established by probabilities or possibilities," *Scaltech Inc. v. Retec/Tetra*, 178 F.3d 1378 (Fed. Cir. 1999)), in a single prior art reference, *Akzo N.V. v. U.S. Int'l Trade Commission*, 808 F.2d 1471 (Fed. Cir. 1986), based on the forgoing, it is submitted that Yamazaki does not anticipate amended claims 12, 14, and 16, nor any claim dependent thereon. The dependent claims are allowable for at least the same reasons as claims 12, 14, and 16.

Conclusion

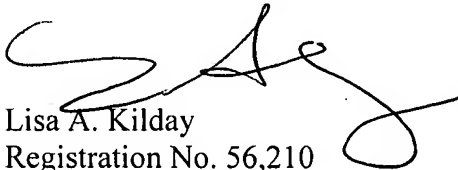
In view of the above amendments and remarks, Applicants submit that this application should be allowed and the case passed to issue. If there are any questions regarding this Amendment or the application in general, a telephone call to the undersigned would be appreciated to expedite the prosecution of the application.

Application No.: 10/520,923

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

McDERMOTT WILL & EMERY LLP



Lisa A. Kilday
Registration No. 56,210

600 13th Street, N.W.
Washington, DC 20005-3096
Phone: 202.756.8000 BPC/LAK:lnm
Facsimile: 202.756.8087
Date: October 29, 2007

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